MONTANA PUBLIC SAFETY SERVICES OFFICE

STATEWIDE E9-1-1 and WIRELESS DEPLOYMENT PLAN

State of Montana
Statewide Deployment Plan
E9-1-1 and Wireless Phase II

Project Summary – Enhanced 9-1-1

Assessment of Existing Problems

The State of Montana 9-1-1 Program is responsible for administering the state's 9-1-1 program on behalf of all local 9-1-1 jurisdictions. It provides a single point of coordination and support associated with State responsibilities for managing the 9-1-1 Program on behalf of the local jurisdictions. The office provides direction for the implementation of Basic 9-1-1 and Enhanced 9-1-1 emergency telephone systems throughout the state and for upgrades and improvements to those systems once they are in place. It also administers the "State 9-1-1 Emergency Telecommunications Account". The 9-1-1 Program staff manages the department's statutory responsibilities for the development, implementation and operation of 9-1-1 emergency telephone and public safety communications systems throughout the state.

- E9-1-1

Over 62% of Montana citizens have access to E911 services. This includes 16 of 58 PSAPs (Public Safety Answering Points). While the majority of the population has the benefit of the enhanced service, many of the rural areas in Montana are just beginning their planning stages. The State 9-1-1 Program Office has initiated an Outreach campaign to assist the jurisdictions in the planning and deployment process. By year end 2003 it is expected to have an additional 30 plans approved. Total statewide E9-1-1 deployment is projected for 2005.

- Wireless Enhanced 9-1-1 (E9-1-1)

Wireless E9-1-1 is critical to the State of Montana and emergency services. This service will enable emergency services to respond quicker by providing the dispatcher with critical location information for a caller on a wireless phone. Currently, when a 9-1-1 call is made from a wireless phone, the call may not be routed to the closest 9-1-1 center, and the call-taker doesn't receive the callback phone number or the location of the caller. There are 3 phases in which Wireless E9-1-1 can be deployed, the final stage, *Phase II*, will allow call-taker to receive both the caller's wireless phone number and their location information. Statewide Phase II readiness is projected for 2005.

- E9-1-1 for the Multi-Line Telephone System (MLTS) (Pseudo-ALI)

Public Safety agencies increasingly rely on the E9-1-1 telephone system to provide dependable and precise information about the caller's location and a reliable number to call back in order to reach the caller in the event that the call was terminated or the caller was unable to speak. 9-1-1 calls made from telephones connected to Multi-Line Telephone Systems (MLTS), such as those in state offices or campus environments, may not be precisely located by the 9-1-1 system, eliminating some of the crucial benefits of E9-1-1. The State of Montana is updating their MLTS in the Capitol Complex to incorporate E9-1-1/location technology into the 9-1-1 network. This will become a model for the design and implementation of providing location technology in other MLTS systems around the state (in public and private switches).

- Geographic Information Services (GIS)

Within the State of Montana, there is no one person or entity with a mandate for designing, creating or maintaining a transportation framework database. This has led to a conglomeration of disparate data sets across jurisdictions and duplicate (sometimes triplicate) data collection for many agencies. Although a significant amount of transportation data exists for the State, it is difficult to locate, and does not readily contribute to effective and efficient decision-making. Additionally, without a standardized data format, support emergency services is limited.

- Emergency Notification Services (ENS)

In addition, location and mapping information is being collected in State owned buildings to allow for quicker response in case of emergencies. Also, an Emergency Notification Service (ENS) will be designed and implemented specifically to deliver warnings and critical safety instructions to designated geographic emergency areas. For example, if it were necessary to evacuate an area due to flooding, the service can launch up to 1,152 calls simultaneously within minutes.

Project Goals and Objectives

It is the mission of the 9-1-1 Program Office to provide ongoing planning, coordination and support associated with the State's responsibilities for managing and promoting a modern and fully enhanced 9-1-1 system.

Provide the citizens of Montana and visitors reliable 9-1-1 emergency services by providing modern public safety communications systems and are affordable and communicate across the full complement of public service providers through these project goals and objectives:

- Provide technical assistance and guidance to local 9-1-1 planning committees for the design, development and deployment of a statewide E9-1-1 communications network.

- Conduct a statewide PSAP inventory and needs assessment to ensure ongoing reliability and deployment of new technologies and evaluate upgrades and enhancements to existing systems.

- Develop statewide standards for addressing for use in emergency services dispatching.

- Update the State Complex MLTS and provide location information on the network.

- Administer the distribution and monitor expenditures of the Basic 9-1-1 and Enhanced 9-1-1 Emergency Telecommunications Account established under 10-4-301, MCA.

- Assist in refining and improving existing training and develop additional training opportunities for 9-1-1.

Implementation Plans

A key to the Montana's success thus far in the 9-1-1 Program Office has been its ability to move forward with small, incremental steps. The full potential of a statewide E9-1-1 network can only be realized through cooperative partnerships, sharing of common components, and interoperability between agencies. Agencies with current or planned E9-1-1 projects will be key participants. By identifying key opportunities to move forward, developing a broad operational

plan, and maintaining a simple approach to the inventory process, the State has done a good job of easing into a potentially complicated process.

Regional areas will be implemented to provide E9-1-1 technology across large geographic regions and subsequently to deploy E9-1-1 technology to all users. Based on the outcomes, the 9-1-1 Program Office will develop a statewide implementation plan using a phased approach. Additional phases will be prioritized based on funding availability and PSAP readiness.

Evaluation Plans, Outcomes and Effectiveness of the Program

- ***Increased E9-1-1 Service Deployments.*** The replacement of obsolete equipment, system redundancy and an effective long-term maintenance strategy will provide reliable enhanced 9-1-1 services to Montana's public safety and service agencies.
- ***Statewide Phase II Wireless E9-1-1 Readiness.*** Public Safety Answering Points will benefit from Phase II wireless readiness and expanded coverage in remote areas such as western Montana's mountainous terrain and eastern Montana's expansive plains, as well as in buildings and through urban canyons.
- ***Enhanced Functionality.*** Public safety and public service providers will benefit from the advanced features of enhanced technologies. This enhanced functionality can provide increased efficiencies and adds redundancy for the PSAP.
- ***Geographic Information Services (GIS).*** A suite of standards for use by local agencies in the application and implementation of E9-1-1 services. A design compliant with the NSDI Transportation Framework Standard. Many jurisdictions will use the framework in new application development (e.g., Addressing, routing, E9-1-1, resource management).
- ***Enhanced 9-1-1 Services on the MLTS.*** Updated network on the Capitol Complex MLTS. This feature will allow emergency services providers to identify the state office building and floor from which the 9-1-1 call has been placed. This will improve response times in emergencies when seconds count.

Most significantly, Montana can realize a safer, healthier and more prosperous future for its residents and visitors through the improved delivery of public safety services.

Next Steps

The real key to maximizing the E9-1-1 network construct is to coordinate state, tribal, and local agency 9-1-1 funds, pool their resources, and leverage the

economies of scale. Rather than fund dozens of stovepipe systems, the state can pursue funding for a single, E9-1-1 network, thereby reducing overall expenditures by eliminating duplication. "Statewide" implementation will move forward using a phased approach by way of regional implementation.

The current estimated cost to plan, design, develop, and implement a system of this nature and statewide scope is $10 million dollars. This cost is based upon the system design and analysis completed over the past year.

The State of Montana, through the Department of Administration's Public Safety Services Office, is seeking federal funding to support the statewide plan. Funding strategies will be based on realistic executable timelines within the scope of the project.

Work on the individual phases of the E9-1-1 project will include strategic planning, project management, stakeholder development, outreach activities, deployment of new technologies and providing expertise and support to Montana leaders of these efforts.

Statewide Solution with ALI Database and Multi-site Phase II Controller Applications

A statewide solution will provide a turnkey statewide E9-1-1 solution including network services, database services, customer premise equipment (CPE) and maintenance and monitoring and training.

Network Services - The network shall be capable of selectively routing wireless 9-1-1 calls to the appropriate PSAP. Redundancy will be provided in any component of the Wireless Enhanced 9-1-1 System to ensure the routing of wireless 9-1-1 calls thought the network and ALI information through the data link network, shall be diversified.

The selective router to PSAP trunking must include dedicated and properly sized trunk groups based on call volume data.